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Higher Education Programs

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Agriculture



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The U.S. food and agricultural sciences higher education system plays a major role in maintaining the Nation's leadership in world agriculture. This higher education system is an integral part of the infrastructure which supports scientific inquiry and pursuit of new knowledge, technology transfer, and development of future generations of scientific and professional expertise.

The U.S. Department of Agriculture (USDA), through its Higher Education Programs office, supports and encourages many efforts aimed at providing the food and agricultural expertise required by the Nation's modern, high-technology, knowledge-based system.



Legislative Mandates

Since enactment of the Food and Agriculture Act of 1977 (Public Law 95-113), as amended, USDA has had the primary Federal responsibility for activities relative to strengthening higher education programs in the food and agricultural sciences. The 1977 Act defines food and agricultural sciences as academic programs concerned with the production, processing, marketing, distribution, conservation, consumption, research, and development of food- and agriculture-related products and services. Included are programs in agriculture, natural resources, forestry, veterinary medicine, and home economics.

The 1977 Act designates the Department of Agriculture as the Federal Government's lead agency for higher education in the food and agricultural sciences. It requires the Secretary of Agriculture to keep informed of developments in research, extension, teaching, and manpower development in the food and agricultural sciences.

The act further states that the Secretary must represent the Nation's needs in these areas in deliberations within the Department of Agriculture, elsewhere within the executive branch of the U.S.

Government, with the States and their land-grant colleges and universities, with agricultural and related industries, and other interested institutions and groups.

The 1981 and 1985 acts reaffirm these responsibilities and authorities of the Department.



USDA's Office of Higher Education Programs

The U.S. Department of Agriculture has established an office of Higher Education Programs (HEP) to carry out the higher education mandates of the Congress. The role of HEP is to provide national leadership for—

- (1) Strengthening college and university programs in the food and agricultural sciences, and
- (2) Producing graduates needed to fulfill the Nation's requirements for scientific and professional expertise.

The Higher Education Program office administers two programs with Congressional funding:

- (1) Morrill-Nelson formula grants, and
- (2) Food and Agricultural Sciences National Needs Graduate Fellowship Grants.

HEP also works closely with representatives from academia, industry, USDA, and other Federal agencies to—

- (1) Establish national priorities for food and agricultural sciences higher education, and
- (2) Develop cooperative Federal-State and public-private action agenda for achieving those priorities.



Morrill-Nelson Formula Grants

Responsibility for the administration of funds appropriated under the Morrill-Nelson Act was transferred from the Department of Education to the Department of Agriculture by the Agriculture and Food Act of 1981. The 1981 act targeted the funds, which are permanently appropriated, to resident instruction programs in the food and agricultural sciences.

Land-grant institutions use Morrill-Nelson funds to support faculty salaries, curriculum development, and other instructional program operating costs. All food and agricultural sciences resident instruction programs at land-grant institutions are eligible for this support. The current annual appropriation for this program is \$2.8 million—\$50,000 per jurisdiction.



Food and Agricultural Sciences National Needs Graduate Fellowship Grants

Authorized by the Food and Agriculture Act of 1977, as amended, Food and Agricultural Sciences National Needs Graduate Fellowship Grants first received Congressional funding in fiscal year 1984. The program consists of competitive institutional grants to recruit and support new graduate students in areas characterized by shortages of expertise—biotechnology, agricultural engineering, food and agricultural marketing, food science, and human nutrition.

The fellowship program is a national investment strategy to attract outstanding students to pursue advanced degrees in the food and agricultural

sciences. All institutions offering a master's or doctoral degree in one or more of the targeted fields are eligible to participate.



Partnership Efforts In Higher Education

If the United States is to maintain superior scientific and professional expertise in the food and agricultural sciences into the 21st century, higher education must make major shifts in such areas as instructional emphases, faculty competencies, and scientific instrumentation.

HEP helps to stimulate cooperative efforts among government, industry, and the academic community to identify needed redirections and to propose ways to effect the necessary changes.

The Secretary of Agriculture's "Challenge Forum," coordinated by HEP in January 1984, is an example of such cooperation. This forum assembled key leaders from government, business, industry, and academia to plan cooperative activities for strengthening the U.S. food and agricultural sciences higher education system.

Working in cooperation with colleges and universities, business, and industry, HEP has initiated several national projects in recent years. These projects are aimed at strengthening the capacity of colleges and universities to produce the quality of expertise required by America's high-technology agriculture and food chain. They include—

- (1) Strengthening Federal-State and public-private partnerships through improved strategic planning,
- (2) Assessing competencies needed by scientists of the future,
- (3) Revitalizing curriculums,

- (4) Designing and promoting faculty development programs,
- (5) Strengthening industry-academia networks to stimulate outstanding students' interests in the food and agricultural sciences,
- (6) Developing model student recruitment programs,
- (7) Developing manpower supply-demand statistics and career information.



Food and Agricultural Education Information System

A major function of the Higher Education Programs office is to develop and disseminate essential baseline data. These data are used both for analyzing attributes of the higher education system and for measuring the supply of and demand for scientific and professional expertise. Through this role, HEP serves as the major Federal office for—

- (1) acquiring, integrating, analyzing, and interpreting national data, and
- (2) preparing and disseminating technical and popular reports concerning higher education in the food and agricultural sciences.

Working with various USDA cooperators, HEP is developing a national computerized information system which will provide current and historical data on the food and agricultural higher education system. This Food and Agricultural Education Information System (FAEIS) is essential for establishing priorities and for proposing policy and program redirections and resource allocations. FAEIS will include a broad spectrum of data which will help in the development of present and evolving profiles on food and agricultural sciences higher education programs, students and graduates, faculty, resources, and other critical attributes.



Cooperating Institutions and Organizations

HEP cooperators play an integral role in identifying major issues of importance to food and agricultural sciences higher education and in setting priorities on those issues. They provide valuable guidance and advice on formulating policy and program recommendations aimed at assuring the Nation of a highly qualified cadre of food and agricultural scientists and professionals.

Cooperating organizations and institutions include the following:

Colleges and universities across the Nation offer some 600 food and agricultural sciences degree programs (at the baccalaureate level and higher) in—

- Agriculture and/or natural resources,
- Forestry,
- Veterinary medicine,
- Home economics

Private sector business and industry

- Foundations,
- Forum for Excellence in the Food and Agricultural Sciences,
- Trade associations,
- Individual businesses and corporations

Professional organizations

- American Association of State Colleges and Universities
- Association of Administrators of State Colleges of Agriculture and Renewable Resources
- American Home Economics Association
- Association of Administrators of Home Economics

- Association of American Veterinary Medical Colleges
- National Academy of Sciences
 - National Research Council's Board on Agriculture
- National Association of Professional Forestry Schools and Colleges
- National Association of State Universities and Land-Grant Colleges
 - Resident Instruction Committee on Organization and Policy
 - Commission on Veterinary Medicine
 - Commission on Home Economics
 - Council for Agricultural Research, Extension, and Teaching
- National Council of Administrators of Home Economics

USDA's Joint Council on Food and Agricultural Sciences

- National Higher Education Committee
- Regional Higher Education Committee

Other Federal agencies, particularly—

- Department of Education
- Department of Labor
- National Science Foundation

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